

REMARKS

Claims 1-52 are pending in the application. Claims 7-42 are conditionally withdrawn from further consideration.

The Examiner rejects: claims 1-6 and 43-52 under 35 U.S.C. §112, second paragraph, as being indefinite; claims 1, 3, 43-46, 48-50 and 52 under 35 U.S.C. §102(e) as being anticipated by Funada et al. (Funada) or Applicant's admitted prior art (specification pages 7-10 and Figs. 1-6b); and claims 2, 4-6, 47 and 51 under 35 U.S.C. §103(a) as being unpatentable over Funada or Applicant's admitted prior art.

35 U.S.C. §112, Second Paragraph, Rejection

In view of the Examiner's comments, Applicant amends claims 1, 43, 46, 49 and 52 in order to overcome the Examiner's §112, second paragraph, rejections, and to more clearly recite the features of Applicant's invention.

In particular, Applicant amends claims 1, 43 and 52 to delete the term "such" (which was deemed indefinite by the Examiner), and claims 46 and 49 to more clearly recite that "substantially all surface area of said at least one of said light emission portions is between said corresponding light receiving element and said document." With regard to claims 46 and 49, the recitation of "said corresponding light receiving element" (rather than "elements", as suggested by the Examiner) has antecedent basis in the parent claim, and is proper because the dependent claims 46 and 49 define a relationship between the surface area of "**said at least one** of said light

receiving elements” and “said corresponding light receiving **element**” (*Id.*, emphasis added).

Accordingly, the Examiner’s §112 rejections should be withdrawn.

Prior Art Rejections

With regard to Applicant’s independent claims 1 and 43, as explained in Applicant’s Amendment filed August 6, 1999, one of the features of the claimed invention is “at least one of said light emission portions being substantially aligned with a corresponding light receiving element” (claim 1, see also claim 43). That is, at least one of the “light emission portions emitting light to said document” is substantially aligned with its corresponding light receiving element (see claims 1 and 43). On the other hand, Applicant’s independent claim 52 requires that “at least one of said light emission portions and a light receiving element corresponding to said at least one of said light emission portions substantially overlap”.

With regard to the prior art devices illustrated in Applicant’s Figs. 1-6B, the light emission portions (e.g., “illumination unit 1310” in Fig. 2, light emitting portions of “dispersion-type EL element 1504” in Fig. 4, and “light emission layer 1623” in Fig. 6A) which emit light to the document (“1390” in Fig. 2, “1590” in Fig. 4, and “1690 in Fig. 6A) are not substantially aligned with (in contradistinction to claims 1 and 43), and do not substantially overlap (in contradistinction to claim 52), their corresponding light receiving elements (“light receiving element array 1306” in Fig. 2, “light receiving element array 1502” in Fig. 4, and “photoelectric conversion elements 1612” in Fig. 6A).

The Examiner alleges that “Figure 3 [sic, Figure. 2] shows that ... at least one end of the fibers 1301 is substantially aligned with the corresponding light receiving element 1306”, and

that "light emission window 1504 [sic, 1510], shown in Figure 4, is substantially aligned with the corresponding light receiving element 1502" (Office Action (Paper No. 15) at page 5).

However, fibers 1301 and windows 1510 are not light emission portions that emit light to the document, as defined in claims 1, 43 and 52.

Applicant's specification discloses that "[t]he light reflected from the document passes through the optical fiber array 1301" (page 4, lines 14-17). Therefore, fibers 1301 do not emit light to the document, but simply pass the light reflected from the document to the light receiving element array 1306 (see Fig. 2).

Applicant's specification discloses that "[i]n the dispersion-type EL element 1504, a light transmission window 1510 is formed corresponding to the light receiving element array 1502", and that "[t]he reflected light from the document 1590 partially passes through the light transmission window 1510" (page 6, lines 12-15 and 24-26). The portion of the dispersion-type EL element 1504 that emits light to the document (i.e., the portion which includes light emission layer 1506) is not aligned with the light receiving element 1502 (see Fig. 4). On the other hand, window 1510 does not emit light to the document but simply passes the light reflected from the document to the light receiving element 1502.

Likewise, as shown in Applicant's Fig. 6A,

Light emitted from the light emission layer 1623 passes through the transparent substrate 1621 to illuminate a document 1690. The reflected light from the document 1690 partially passes through the transparent substrate 1621 and the opening portion 1625 and is detected by the photoelectric conversion element 1612 ... (Applicant's specification, page 9, lines 11-17; see Applicant's Fig. 6A).

Clearly, opening portion 1625 is not a "light emission portion" that emits light to the document, but is simply an "openings" for passing the light reflected form the document.

Therefore, contrary to the Examiner's analysis, fibers 1301, windows 1510, and opening portions 1625 are not "light emission portions emitting light to said document", as recited in Applicant's claims 1, 43 and 52.

Likewise, Funada does not disclose or even suggest a structure wherein the light emission portions that emit light to the document are substantially aligned with the corresponding light receiving elements. In particular, the arrangement shown in Funada's Fig. 4 parallels the arrangement shown in Applicant's Fig. 4. That is, in Funada the portions of EL light emitting elements 200 that emit light to document 400 (i.e., the portions that contain light emitting layer 203 sandwiched by transparent electrode 201 and opaque metal electrodes 205) are not aligned with light receiving elements 100. On the other hand, windows 206 do not emit light to document 400, but simply pass the light reflected from document 400 to light receiving element 100. (See Funada at col. 9, line 47 - col. 10, line 53.)

In summary, Applicant's admitted prior art devices and Funada do not disclose or even suggest at least the feature of a light emission portion being substantially aligned with its corresponding light receiving element, as recited in Applicant's independent claims 1 and 43. Likewise, Applicant's admitted prior art devices and Funada do not disclose or even suggest an image sensor device wherein at least one light emission portion and its corresponding light receiving element substantially overlap, as recited in Applicant's independent claim 52. Therefore, claims 1, 43 and 52, as well as the dependent claims 2-6 and 44-51 (which incorporate, by reference, all the novel and unobvious features of their respective base claims)

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are not anticipated by (i.e., are not readable on), and would not have been obvious from, Funada and Applicant's admitted prior art at least for the reasons noted above.

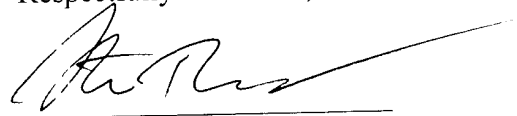
Conclusion

In view of the foregoing remarks and amendments, Applicant respectfully requests the Examiner to find the application to be in condition for allowance with claims 1-6 and 43-52. However, if for any reason the Examiner feels that the application is not now in condition for allowance, the Examiner is respectfully requested to **call the undersigned attorney** to discuss any unresolved issues and to expedite the disposition of the application.

N.B. Since at least claim 43 is generic to the provisionally non-elected species I, II, VI, IX and X, and since this claim should now be allowable, the Examiner is requested now also to examine (and allow) claims 7-12.

Applicant hereby petitions for any extension of time which may be required to maintain the pendency of this case, and any required fee, except for the Issue Fee, for such extension is to be charged to Deposit Account No. 19-4880.

Respectfully submitted,



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